

EIS000715

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Testimony of Tony deBellis,  
Trip Leader with Desert Survivors

On the Department of Energy's  
Draft Environmental Impact Statement for a Geologic Repository  
for the Disposal of Spent Nuclear Fuel and High-Level Radio-  
active Waste at Yucca Mountain, Nye County, Nevada

January 11, 2000

Thank you for the opportunity to write regarding the Department  
of Energy's Draft Environmental Impact Statement for a Geologic  
Repository for the Disposal of Spent Nuclear Fuel and High-Level  
Radioactive Waste at Yucca Mountain.

I am a Trip Leader, representing Desert Survivors, an environ-  
mental organization of almost one thousand, headquartered in  
Oakland, California. Our job is to share experience and protect  
the desert.

1 The DEIS is unacceptable and should be rewritten. The DOE is  
nonchalant about the potential impacts on the desert environment  
from the Yucca Mountain Project, and the DEIS - by scattering  
and obfuscating information throughout the report - makes it  
difficult for those who care about this environment to form a  
clear picture of the overall impacts to desert lands and species.

Because they are poised in such harsh extremes of heat and aridity,  
deserts are among the most fragile ecosystems on the planet.  
Even subtle changes or disturbances can greatly affect desert  
plants and animals and the delicate balance of the ecosystem.  
The Yucca Mountain region is a desert environment and is home to  
the desert tortoise, a threatened species. Threatened species  
are defined as plants and animals whose numbers are very low or  
decreasing rapidly, so it is imperative to the tortoise's survival  
that it be protected in all proposals concerning Yucca Mountain.

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The DEIS notes that from 1989 to 1998, five (5) tortoises were  
killed by vehicles on roads in the Yucca Mountain region as a  
result of site characterization activities. However, the DEIS makes  
light of the fact that several thousand trucks could potentially  
be travelling on current and new roads in the Yucca Mountain region  
if the repository is built. If five tortoises were killed in a  
period of relatively light activity, how many more tortoises will  
be killed if Yucca Mountain is licensed as a repository, and  
there are more roads, cars and trucks? Once again, the DEIS  
has failed to adequately address environmental impacts.

EIS000715

2 continued

The desert tortoise could also be affected by an increase in soil temperature. Desert tortoises burrow into the soil in order to escape the great heat of the desert. If the temperature of the soil increases (because of the heat generated by the nuclear waste), the tortoise's ability to survive may be compromised. The DEIS also notes that nest temperature determines whether desert tortoise hatchlings will be male or female. If the temperature of the soil around the repository increases, the sex ratio of the species could be affected, thus compromising the ability of the species to thrive and survive. The DOE admits, "little is known about the effects that minor alterations in habitat would have on desert tortoise population dynamics (p. 5-48)."

The DOE also admits that not much is known about the thermal properties of the soil at Yucca Mountain, particularly thermal conductivity, and so that there is considerable uncertainty in the estimates of soil temperature changes from the repository. The possibility that the repository could cause an unforeseen effect on heating up the desert soil to a dangerous level coupled with the increased risk of death from vehicles could lead to severe consequences for the desert tortoise. Yet, the DEIS does not characterize these potential effects clearly or take them seriously.

3

The DEIS also notes that the DOE will use controls to limit surface water contamination, but the DEIS does not outline the impacts that could occur if DOE's controls fail. It is unacceptable to state categorically that there will be no impacts because controls are in place. If that were true, the word "accident" would not be in our vocabulary.

4

The nuclear industry has lied to us for several decades, claiming that nuclear energy is good for the environment. The truth is that nuclear energy and the waste it produces is one of the most destructive forces in the world. The DEIS should be completely rewritten in order to honestly characterize the impacts of the DOE's choice to support the nuclear industry and its ever-increasing amount of toxic garbage.

5...

The DEIS is an incomplete and unacceptable document. It does not adequately and honestly characterize the potentially severe health impacts of a nuclear waste repository at Yucca Mountain.

Groundwater upwelling and earthquakes are two issues not adequately discussed in the DEIS. The DOE notes an opposing viewpoint, stating that "Several investigators have suggested that the water table in the vicinity of Yucca Mountain has risen dramatically higher than 100 meters (330 feet) above the current level, even reaching the land surface in the past (Szymanski, 1989, all). If such an event occurred, it would affect the performance of

## EIS000715

5 continued

the proposed repository" (p. 3-49). DOE even admits, "if such an event occurred, the long term impacts would probably increase greatly" (p. 5-15). Yet, the DEIS dismisses this possibility and does not address the potential impacts of such an event.

DOE notes another opposing viewpoint by Davies and Archambeau which suggests that a moderate earthquake at the site could result in a water table rise of about 150 meters (490 feet) and a severe earthquake could cause a rise of about 240 meters (790 feet) in the water table, which would flood the repository. Nevada ranks third in the nation for current seismic activity. Since 1976, there have been over 600 seismic events of a magnitude greater than 2.5 within a 50-mile radius of Yucca Mountain. The DEIS states that "earthquakes have occurred in the Yucca Mountain geologic region of influence and are likely to occur in the future" (p. 5-16). Yet, the DOE has repeatedly ignored the potential impacts of future earthquakes at the Yucca Mountain site and refuses to examine how an earthquake might affect the region's groundwater supply.

6

It is vital that the DOE honestly characterize the potential impacts of groundwater contamination. The residents of the Amargosa Valley rely on the groundwater that runs beneath Yucca Mountain for drinking, washing, and irrigation. The cumulative effect of contaminated groundwater on these residents would be great. The DOE fails to adequately identify those who would be most severely affected by radiological contamination of groundwater. The DEIS identifies the "critical group reference person" as an adult who lives year round in Amargosa Valley, uses a well as a primary water source, and lives in a manner similar to a typical inhabitant of Amargosa Valley (p. 5-14). The DEIS should instead identify the maximally exposed individual (MEI) person as a fetus in the womb of a subsistence farmer in the Amargosa Valley region because this fetus would more accurately represent the individual whose health will be most at risk from groundwater contamination.

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Further, the DEIS notes that if populations were to move closer to or increase in size in the Yucca Mountain groundwater hydrology region of influence, the radiation does and resultant impacts could increase (p. 5-17). Clark County, Nevada is one of the fastest growing areas in the United States and the 10th largest school district in the country. Population in this area continues to increase dramatically. This county is right next door to Nye County, where Yucca Mountain is located. It seems likely that increased expansion of the Clark County and Las Vegas areas will lead to an outward growth pattern that will result in a significant number of people living closer to Yucca Mountain and in the region of influence. Yet, the DEIS assumes that the population will remain the same for thousands of years. This assumption is absurd. The DEIS should at least use current

EIS000715

...7 growth patterns to predict an increase in population in the area and then project the dose levels according to these productions.

8 Groundwater contamination is a major human health concern with regard to a potential nuclear waste repository at Yucca Mountain. The DOE has a responsibility and an obligation to the American people to honestly characterize the risk associated with storing 77,000 metric tons of radioactive waste at this site. It is unacceptable for the DOE to simply say, "the groundwater probably won't be contaminated" or "populations probably won't increase," and ignore the potential for severe health related consequences in order to continue the nuclear industry's lie that nuclear power and the waste it produces is not dangerous.

In conclusion, I wish to make clear that the only things that the human race has learned about nuclear waste disposal is:

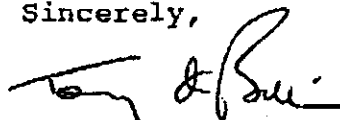
9 a) No human designed waste container has not leaked.

b) Nuclear waste always works its way lower into the earth carried by underground water.

So, 98% of the waste deposited in Yucca Mountain will end up, percolated and bubbling, beneath Death Valley National Park. It is true that only 2% will permanently poison the Las Vegas aquifer.

Thank you for this opportunity to testify.

Sincerely,



Tony deBellis  
Leader Desert Survivors